Chilkoot Lake Weir Improvements

FY2003 Request: **$75,000**
Reference No: **35852**

AP/AL: Appropriation
Category: Natural Resources
Location: Juneau Areawide
Election District: Juneau Areawide
Estimated Project Dates: 07/01/2002 - 06/30/2007

Project Type: Renovation and Remodeling

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Brief Summary and Statement of Need:
The Chilkoot Lake historically has been one of the largest sockeye salmon producers in Southeast Alaska. The Chilkoot weir has been operated annually since 1976 and has been a critical tool for effective management of the Chilkoot Lake sockeye run and the Lynn Canal gillnet fishery. This CIP will fund an engineering study to design a weir sill and weir fish trap, construction and installation of the fish trap, replacement of worn weir pickets and stringers, use of heavy equipment for stream bed modifications, permitting costs,and construction and installation of the weir sill.

Funding:

	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	Total
Gen Fund	$75,000						$75,000
Total:	$75,000	$0	$0	$0	$0	$0	$75,000

☐ State Match Required ☒ One-Time Project ☐ Phased Project ☐ On-Going Project
0% = Minimum State Match % Required ☐ Amendment ☐ Mental Health Bill

Operating & Maintenance Costs:

	Amount	Staff
Total Operating Impact:	0	0
One-Time Startup Costs:	0	
Additional Estimated Annual O&M:	0	0

Prior Funding History / Additional Information:
None

Chilkoot Lake historically has been one of the largest sockeye salmon producers in Southeast Alaska. The Chilkoot weir has been operated annually since 1976 and has been a critical tool for effective management of the Chilkoot Lake sockeye run and the Lynn Canal gillnet fishery. Reliable in-season weir counts are essential to determine if escapement goals are being attained, to assess the effects of various management decisions on escapement, and to provide the age, sex and size data needed to reconstruct run size of Chilkoot Lake sockeye salmon runs. Without accurate in-season information fishery managers must act conservatively to ensure adequate escapement, resulting in foregone fishing opportunities. In recent years, poor returns of Chilkoot Lake sockeye have resulted in severe restrictions to the gillnet fishery in lower Lynn Canal and reduced fishing opportunities on large runs of Chilkat Lake sockeye salmon and hatchery chum salmon.

The I-beam post and channel steel superstructure of the 360 foot long Chilkoot weir has proved to be well designed and sturdy since its construction in 1967. However, the shifting bed-load of the river and wear and tear on weir component parts has made it difficult to ensure that the weir remains a fish-tight structure. Operation of a mark-recapture program at the weir during the last six years suggests that in some years a substantial portion of the escapement could be passing through the weir uncounted. Making improvements to the weir structure could substantially reduce the variable but significant undercounting bias of the weir.

The robustness of the weir would be greatly enhanced by installation of a sill along the base of the weir that pipe pickets could interlock with. Currently, iron pickets are installed through holes on the superstructure and rest on the river bottom. A sill would allow pickets to rest on a solid foundation thus minimizing leakage of fish through the weir. Additional modifications that would improve the weir include using heavy equipment to move boulders located in the stream bed near the weir to minimize water scouring, replacing worn pickets and bent stringers, and designing and constructing a new fish and operator-friendly weir trap to improve the efficiency of fish counting, sampling and marking efforts.

This CIP for $75,000 supports an engineering study to design a weir sill and weir fish trap, construction and installation of the fish trap, replacement of worn weir pickets and stringers, use of heavy equipment for stream bed modification, project permitting costs and (dependent on costs) construction and installation of the weir sill.